

1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: Dry Film RA/IPA RED
PTFE Release Agent/Dry Lubricant

Product Use: Release Agent or Dry Lubricant

MANUFACTURER/DISTRIBUTOR:

Miller-Stephenson Chemical
55 Backus Ave.
Danbury, Conn. 06810 USA
(203) 743-4447

Emergency Phone Number:
(800) 424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

Flammable liquids: Category 2
Serious Eye Damage/Eye Irritation: Category 2A
Specific Target Organ Toxicity (single exposure): Category 3

Label elements:

Signal word

Danger

Pictograms



Hazardous warnings

Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness

Precautionary Statements

Keep away from heat/sparks/open flames/hot surfaces and other ignition sources – No smoking.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.

Take precautionary measures against static discharge.
Avoid breathing fumes/gas/vapor/spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/ physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.
Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Dispose of contents/container to an approved waste disposal plant.

Other Hazards

The thermal decomposition vapors of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco. Vapors may form explosive mixture with air.

3. INGREDIENTS

<u>Material (s)</u>	<u>CAS No.</u>	<u>Approximate %</u>
Isopropyl Alcohol	67-63-0	70 – 90

4. FIRST AID MEASURES

Inhalation: Remove patient to fresh air. Get medical attention.

Eye: Immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Continue to rinse. Get medical attention.

Skin: Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before use. Thoroughly clean shoes before reuse. Get medical attention.

Oral: DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed: Inhalation of decomposition products may provoke the following symptoms: Polymer fume fever. Eye contact may provoke the following symptoms: Irritation Causes serious eye irritation. May cause drowsiness or dizziness.

Note to physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flash Point: 53°F /12°C

Method: Tag Closed Cup

Autoignition Temperature: 750°F /399°C

Flammable Limits in Air, % by Vol.:

LEL: 2%

UEL: 12%

Suitable Extinguishing Media: Water spray, Alcohol-resistant foam, Dry chemical, Carbon dioxide (CO2)

Unsuitable extinguishing media: High volume water jet.

Special hazards: Flammable liquid. Vapor forms explosive mixture with air. Vapors or gases may travel considerable distances to ignition sources and flash back. Exposure to combustion products may be a hazard to health.

Hazardous combustion products: Carbon oxides, Hydrogen fluoride, carbonyl fluoride and fluorinated compounds.

Specific extinguishing methods: Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Keep unopened containers cool by spraying with water. Remove undamaged containers from fire area if is safe to do so.

Special Fire Fighting Instruction: In the event of fire, wear self-contained breathing apparatus and other protective clothing to prevent contact with the skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Use personal protective equipment. Ventilate area. Evacuate personnel to safe area. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations.

Environmental precautions: Avoid release to the environment. Prevent material from entering sewers, waterways, or low areas. Do not allow contact with soil, surface, or ground water. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up: Non-sparking tools should be used. Contain spillage, and then collect with inert absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, or clothing. Do not inhale vapor or mist. Wash thoroughly after handling. Non-sparking tools should be used. Keep container tightly closed. Keep away from heat, sources of ignition, sparks, open flame and other ignition sources. Take measures to prevent the buildup of electrostatic charge. Do not consume food, drink or smoke in areas that may be contaminated with this material.

Storage Conditions: Keep container tightly closed and store in a clean, cool and dry area that is well-ventilated. Avoid storage with strong oxidizing agents, Pyrophoric substances, flammable solids/gases, self-active or self-heating substances and mixtures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

Isopropyl Alcohol

TWA (ACGIH)

200 ppm

TWA (OSHA)

400 ppm

Use only with adequate ventilation.

Respiratory Protection General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Eye Protection: Avoid eye contact. Use chemical goggles or safety glasses with side shields.

Skin Protection: Where there is potential for skin contact have available and wear as appropriate impervious gloves and protective clothing. Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Take note that the product is flammable, which may impact the selection of skin protection. Wash hands before breaks and at the end of workday.

Hygiene measures: Do not smoke in area. Wash after handling. Do not eat or drink when using the material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 82°C/180°F

Percent Volatile by Volume: 75%

Density: 0.8 g/cc at 77°F/25°C

Vapor Pressure: 33 mmHg at 68°F/20°C

Vapor Density (Air=1): 2.1

Solubility in H₂O: partly soluble

pH Information: 4–7

Evaporation Rate (CC14=1): N.A.

Form: Liquid

Appearance: Red liquid

Color: Red

Odor: Characteristic alcohol

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical Stability: Stable at normal temperatures and storage conditions.

Possibility of hazardous reactions: Vapors may form explosive mixture with air. Can react with strong oxidizing agents. Hazardous decomposition products will be formed at elevated temperatures.

Conditions to Avoid: Heat, sparks, and flames.

Incompatible Materials: Oxidizing agents

Hazardous decomposition products: Carbon oxides. Hydrofluoric acid. Carbonyl difluoride.

11. TOXICOLOGICAL INFORMATION

Isopropyl Alcohol

Acute Oral: LD50, Rat, > 5,000 mg/kg

Acute Dermal: LD50, Rabbit, > 5,000 mg/kg

Acute Inhalation (vapor): 6 hour LC50, Rat > 25 mg/l

Skin Corrosion/Irritation: No skin irritation in rabbits.

Serious Eye Damage/Irritation: Irritation to eyes in Rabbits, reversing within 21 days.

Skin Sensitization: Buehler Test (skin contact) is negative in Guinea pig. Method OECD Test Guideline 406

Respiratory Sensitization: Not classified based on available information.

Germ Cell Mutagenicity: In vitro and In vivo - Not Mutagenic

Carcinogenicity: Negative in rats exposed 104 weeks by inhalation (vapor). Method: OECD Test Guideline 451

Reproductive Toxicity: Negative in rats by ingestion based on Two-generation reproduction toxicity study and Embryo-fetal development.

STOT- single exposure: May cause drowsiness or dizziness

STOT- repeated exposure: NOAEL, Rat exposed 104 weeks by inhalation (vapor): 12.5 mg/l

Aspiration toxicity: Not classified based on available information.

12. ECOLOGICAL INFORMATION

Isopropyl Alcohol

Toxicity to fish: 96 hour LC50 in Pimephales promelas (fathead minnow): 9,640 mg/l

Toxicity to daphnia and other aquatic invertebrates: 24 hour EC50 in Daphnia magna (water flea): >10,000 mg/l

Toxicity to microorganisms: 16 hour EC50 in Pseudomonas putida: >1,050 mg/l

Persistence and degradability: Rapidly degradable. BOD: 1.19 (BOD5)COD: 2.23BOD/COD: 53%

Bioaccumulative potential: Partition coefficient: n-octanol/water: log Pow: 0.05

Mobility in soil: No data available.

13. DISPOSAL CONSIDERATIONS

Empty containers must not be burned because of the explosive hazard. Recover and reclaim or recycle, if practical. Comply with Federal, State/Provincial and Local regulations. Remove to a permitted waste disposal facility.

14. TRANSPORT INFORMATION

U.S. DOT

Proper Shipping Name: Isopropanol

Hazard Class: 3

Identification No. UN1219

Packing Group: II

IATA

Proper Shipping Name: Isopropanol

Hazard Class: 3

Identification No. UN1219

Packing Group: II

IMDG

Proper Shipping Name: Isopropanol

Hazard Class: 3

Identification No. UN1219

Packing Group: II

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA: All ingredients are listed in TSCA inventory.

SARA 304 Extremely Hazardous Substances Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity: This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards: Flammable (gases, aerosols, liquids or solids). Serious eye damage or eye irritation. Specific target organ toxicity (single or repeated exposure).

SARA 313 Regulated Chemicals: The following component are subject to reporting levels established by SARA Title III, Section 313: Isopropyl Alcohol, CAS No. 67-63-0, 80 – 90%. The chemicals listed below may not be intentionally present in the product; however, it is possible that these chemicals may be present as an impurity and the maximum concentration would be:

3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctanesulphonic acid, CAS No.: 27619-97-2, < 888 ppb

Perfluorobutanoic acid, CAS No.: 375-22-4, < 6 ppb

Perfluorohexanoic acid, CAS No.: 307-24-4, < 9 ppb

Perfluorononanoic acid, CAS No.: 375-95-1, < 12 ppb

Perfluorododecanoic acid, CAS No.: 307-55-1, < 14 ppb

Perfluorodecanoic acid, CAS No.: 335-76-2, < 15 ppb

Perfluorooctanoic acid, CAS No.: 335-67-1, < 25 ppb

California Proposition 65: WARNING: This product can expose you to chemicals including 2,2'-Iminodiethanol, which is/are known to the State of California to cause cancer, and pentadecafluorooctanoic acid, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. . Note to User: This product is not made with PFOA nor is PFOA intentionally present in the product; however, it is possible that PFOA may be present as an impurity at background (environmental) levels.

16. OTHER INFORMATION

NPCA-HMIS Ratings:

Health - 2

Flammability - 3

Reactivity - 0

Personal Protective rating to be supplied by user depending on the conditions.

FOR INDUSTRIAL USE ONLY

REVISION DATE: February 6, 2025

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.